

Claims

- [c1] A universal provisioning system for radiotelephone handset units of varying model, manufacturer, and platform, comprising:
- an interface having at least one universal connector adapted for connection to radiotelephone handsets having different specifications;
 - a computer operably connected to the interface; memory storage in communication with the computer containing provisioning and instruction data for a specified radiotelephone handset connected via the interface; and
 - software for verifying connection of the specified handset and automatically transferring the provisioning data to handset memory storage via the interface in accordance with the instruction data.
- [c2] The universal provisioning system of claim 1, wherein said universal connector is chosen from the group consisting of male USB Type A connector, male USB Type B connector, male Mini USB connector, male Mini USB 2.0 connector, male 4-pin IEEE-1394 connector, male 6-pin IEEE-1394 connector, female USB Type A connector, fe-

male USB Type B connector, female Mini USB connector, female Mini USB 2.0 connector, female 4-pin IEEE-1394 connector, female 6-pin IEEE-1394 connector and combinations thereof.

[c3] The universal provisioning system of claim 1, wherein said interface is operably connected to said computer by one or more operable connections chosen from the group consisting of metallic wire, radiofrequency communication, infrared communication, fiber optic cable and combinations thereof.

[c4] The universal provisioning system of claim 1, wherein said memory storage is chosen from the group consisting of random access memory, non-volatile hard drive storage, non-volatile flash memory, volatile flash memory, removable magnetic media storage, optical storage, magnetic tape storage media, EPROM memory and combinations thereof.

[c5] The universal provisioning system of claim 1, wherein said provisioning data comprises roaming instructions, user features, number assignment module settings, browser and short messaging service settings, phone book entries, date book entries, message settings, carrier specific settings, user specific settings, or combinations thereof.

[c6] The universal provisioning system of claim 1, wherein said instruction data comprises production build request number, quantity of phones to provision, carrier type, customer identification data, starting part number, final part number, handset manufacturer, handset technology type, handset model number, or a combination thereof.

[c7] An automated method of provisioning radiotelephone handset units, comprising:

- generating a build request comprising a radiotelephone handset specification and provisioning and instruction data for the specified handset;
- storing the build request in a memory storage medium in communication with a computerized provisioning system;
- retrieving data from the build request;
- connecting the provisioning system to a handset in accordance with the build request specification;
- automatically transferring the provisioning data to memory storage of the connected handset in accordance with the instruction data; and
- disconnecting the provisioned handset from the provisioning system.

[c8] The automated method of claim 7, wherein said generating and storing are performed on a workstation net-

worked with said computerized provisioning system.

[c9] The automated method of claim 7, wherein said build request generation comprises:

- entering a production build request number;
- entering a quantity of phones to provision;
- selecting a carrier type;
- selecting a customer;
- entering a starting part number;
- entering a final part number;
- selecting a handset manufacturer;
- selecting a handset technology;
- selecting a handset manufacturer's model number;
- or
- a combination thereof.

[c10] The automated method of claim 9 wherein the build request generation further comprises entering Service Provider Codes .

[c11] The automated method of claim 9 wherein the build request generation further comprises entering Authentication Keys.

[c12] The automated method of claim 7, wherein said data retrieval comprises:

- selecting a production build request number;

displaying the final part number;
displaying the handset manufacturer;
displaying the handset manufacturer's model number;
displaying an image of the handset model;
displaying the customer name; or
a combination thereof.

[c13] The automated method of claim 12, wherein the build request generation and storage are performed by a first person and the data retrieval and handset connection are performed by a second person.

[c14] The automated method of claim 7, further comprising:
inspecting the memory storage of the handset to verify provisioning data integrity.

[c15] The automated method of claim 14 further comprising:
storing data gathered from the verification step of claim 12 and generating reports based on the data.

[c16] The automated method of claim 14 wherein said handset connection is at a first work station and the inspection is effected for a plurality of the provisioned handsets at a second work station and includes:
entering a production build request number;
connecting a provisioned handset selected from said

plurality of provisioned handsets according to the build request data associated with the production build request number;

comparing the provisioning information in the memory storage of the provisioned handset to the provisioning data associated with the production build request number;

marking the handset with a passing indicator if the provisioning information matches the provisioning data;

marking the handset with a failed indicator if the provisioning information differs from the provisioning data;

repeating the connection, comparison, and marking on additional handsets for the production build request number;

determining whether the production build request passes or fails based on the instruction data associated with the production build request number and returning a pass/fail for the production build request;

sending failed handsets from a passing production build request to a repair station; and

sending handsets from a failing production build request to an area for segregation.

- [c17] The automated method of claim 16 wherein the determination of whether the production build request passes or fails is in accordance with ANSI Quality tables for inspection under ANSI Z 1.4.
- [c18] An automated method of provisioning a plurality of radiotelephone handset units, comprising:
- generating a plurality of build requests comprising radiotelephone handset specification data and provisioning and instruction data for the specified handset;
 - storing the build requests in a memory storage medium in communication with a computerized provisioning system;
 - selecting an available one of the build requests from the storage medium;
 - displaying handset specification data from the selected build request;
 - connecting the provisioning system to a handset in accordance with the specification data display;
 - querying the connected handset via the provisioning system to compare connected handset specification data with the build request specification data; and
 - automatically transferring the provisioning data to memory storage of the connected handset in accordance with the instruction data.

[c19] The automated method of claim 18, wherein said generation and storage are performed on a workstation networked with the computerized provisioning system.

[c20] The automated method of claim 18, wherein said generation further comprises:

- entering a production build request number;
- inputting a quantity of phones to provision;
- selecting a carrier type;
- selecting a customer;
- entering a starting part number;
- entering a final part number;
- selecting a handset manufacturer;
- selecting a handset technology;
- selecting a handset manufacturer's model number;
- or
- a combination thereof.

[c21] The automated method of claim 9 wherein the build request generation further comprises entering Service Provider Codes.

[c22] The automated method of claim 9 wherein the build request generation further comprises entering Authentication Keys.

[c23] The automated method of claim 18, wherein the display

comprises:

- displaying a final part number;
- displaying a handset manufacturer;
- displaying a model number of the handset manufacturer;
- displaying an image of the handset model;
- displaying a customer name; or
- a combination thereof.

[c24] The automated method of claim 18, wherein said querying comprises:

- communicating with the connected handset;
- determining manufacturer and model number of said handset;
- comparing the manufacturer and model number of the connected handset with the requested manufacturer and model number; and
- continuing the provisioning or displaying instructions to the operator to connect a different handset based on the result of the comparison.

[c25] The method of claim 18 further comprising:
inspecting the memory storage of the automatically provisioned handset to verify provisioning data integrity.

[c26] The automated method of claim 25 further comprising:

storing data gathered from the verification step of claim 20 and generating reports based on the data.

[c27] The automated method of claim 25 wherein said inspection includes:

- entering a production build request number;
- connecting the provisioned handset according to the build request data associated with the production build request number;
- comparing the provisioning information in the memory storage of the connected handset to the provisioning data associated with the production build request number;
- marking the handset with a passing indicator if the provisioning information matches the provisioning data;
- marking the handset with a failed indicator if the provisioning information differs from the provisioning data;
- repeating the connection, comparison, and marking for additional handsets for the production build request number;
- determining whether the production build request passes or fails based on the instruction data associated with the production build request number and returning a pass/fail for the production build re-

quest;
sending failed handsets from a passing production build request to a repair station; and
sending handsets from a failing production build request to an area for segregation.

[c28] The automated method of claim 27 wherein determination of whether the production build request passes or fails is in accordance with ANSI Quality tables under ANSI Z 1.4.